

THE CONDITION OF THE
HYMEN AND ITS REMAINS

BY

COHABITATION, CHILDBEARING AND LYING-IN.

BY

PROF. DR SCHROEDER,
BERLIN.

*(Translated and Read before the Edinburgh Obstetrical Society, 13th
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THE

CONDITION OF THE HYMEN AND ITS REMAINS BY
COHABITATION, CHILDBEARING AND LYING-IN.

GENTLEMEN,—I take the liberty of submitting to you several drawings which illustrate the condition of the entrance to the vagina, and especially of the hymen, after cohabitation and childbearing. It is known to you, that hitherto the general opinion has been that the hymen by the first cohabitation was torn, and that the cicatricial retracting remains of the same formed the carunculæ myrtiformes. It was also generally believed that those elevated warty excrescences at several places of the vaginal entrance were directly formed by the first coitus. This opinion does not agree with the real circumstances as inspection teaches. I have already, in the year 1867, drawn attention to the fact that the carunculæ myrtiformes are first formed in consequence of childbearing on account of parts of the hymen gangrenating.

This fact I find very frequently questioned in literature; it is confirmed, so far as I know, only by Bidder in Dorpat (see *Petersb. Med. Z.* 1868, p. 50). I have therefore, with the help of Dr Alt, my assistant, had drawings made of the vaginal entrance in a number of pregnant females before and again after the birth of the child, so that we can easily be convinced of the effect of the act of childbearing by comparing the two drawings.

Before I submit the drawings to you, I will advance only a few introductory remarks.

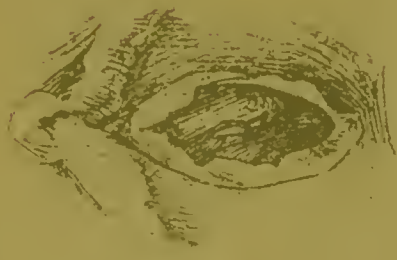
The hymen is formed, as you know, from a fold of the mucous membrane arising from the edge of the vaginal entrance, and encircling with its free edge the opening leading into the vagina. If we state generally that the hymen is semilunar in shape, that is not quite accurate. It is more correct to represent the hymen as

a membrane stretched out in the entrance to the vagina, in which there is an opening, not in the centre, but towards the orifice of the urethra, so that the larger border on that account lies towards the posterior commissure. In front the rim of the hymen is indeed smaller, but it is not wanting. This is the usual condition of the hymen. The rarer formations we pass over, as it is our purpose only to determine the physiological condition of the hymen. The opening of the hymen is of very different sizes. As a rule, it is at least so wide that one can pass the finger into the vagina without injuring the border of mucous membrane. The fold not rarely gets indeed considerably destroyed thereby, or even tears quite easily with little bleeding; yet, in the great majority of cases, the hymen can be preserved by a careful manipulation, so that an uninjured hymen by no means forbids an examination per vaginam. Exceptionally the opening can be so small that we cannot introduce the finger through it; indeed, it has been known that in an abnormal manner the opening can be entirely wanting. But it is much more common that the opening in the hymen is wide, so that the finger passes easily through, or that even the impetuous pushing in of the penis produces no tearing of the hymen. In the drawings which I will now submit to you, you will be astonished to see how frequently the hymen has remained wholly or almost entirely intact. The hymen frequently forms only a quite small stretchable rim, which is raised all around from the edge of the vaginal entrance in a pretty equal but insignificant elevation, and which on the pushing in of the penis simply yields without tearing.

The hymen, therefore, not rarely remains almost unchanged by cohabitation, whilst it is only dilated by often repeated coitus, or only slightly indented on its free edge through slight tears. Where the opening is smaller, then, indeed, it is torn to a considerable extent, yet it is never torn to such an extent that real *carunculæ myrtiformes* are formed. These latter are formed, as we can easily convince ourselves by examining the vaginal entrance of sterile married women or of prostitutes, not even after very frequently repeated coitus. Through the pushing in of the penis the free fold of the hymen will at most be torn, so that one, two, and more tears are formed, which sometimes, but not at all regularly, reach the base of the hymen. Such tears are not rarely found just towards the back, most frequently towards the back laterally, but also just towards the side, most rarely forwards. As a rule, there are only one, two, or three; still, they may become much more numerous, and in the most extreme cases the hymen is changed into a continuous row of small projecting points. But in such cases there is always found, where the hymen springs from the edge of the vaginal entrance, a connexion between the separate small pieces, however numerous the tears may be. These stand here close by one another, there is never a space between them; every trace of the hymen has also never disappeared at that place of the vaginal

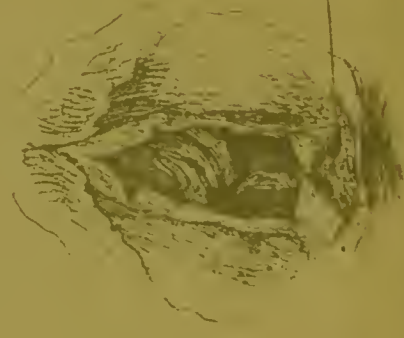
Landerbeck 19/4

I Pysyffs



Epidendrum 3/4 : Epidendrum

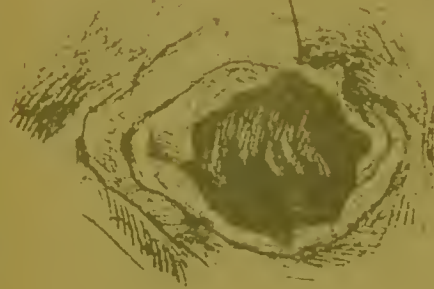
13/12



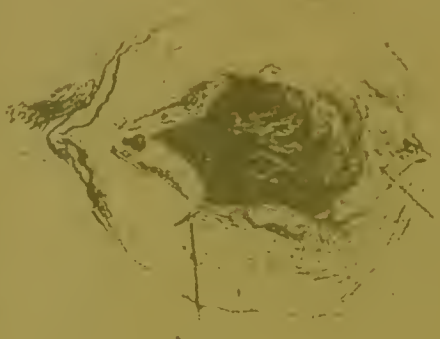
a. Epidendrum, Epidendrum

Landerbeck 24/

I Pysyffs
Epidendrum & Mamm



a. Epidendrum



b

8/11

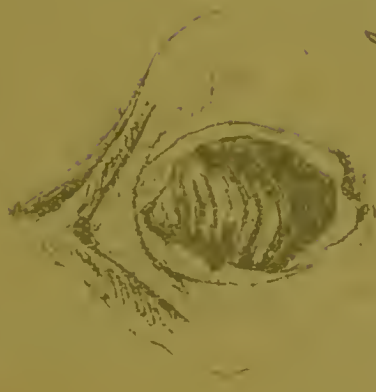
a. Epidendrum, Epidendrum
b. Epidendrum, Epidendrum

20710 (Pommes 2.5)

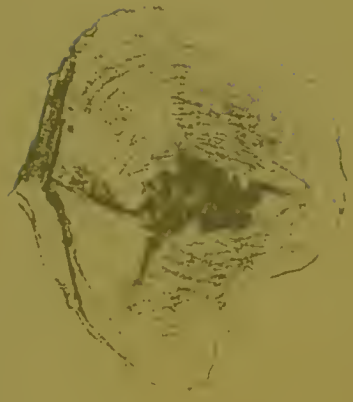
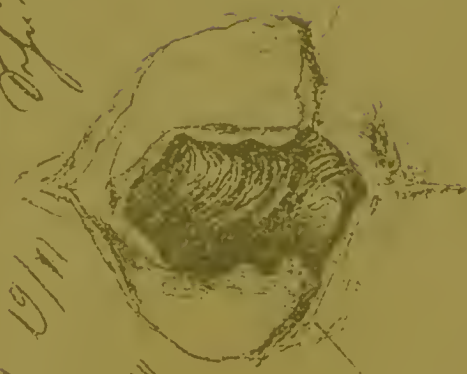
2 Papaya 1/4

2 Papaya 1/4

Memo 23/4/11



20710 19/4 1/4 Papaya 23/4



4 x 71



20710 19/4 1/4 Papaya 23/4

Hermann 29/II

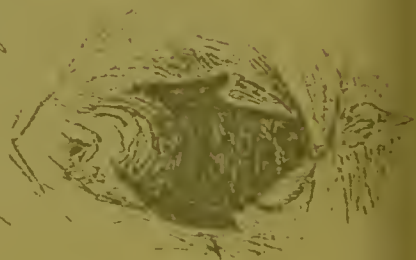


a

a. Aufsprung des Egmens mit der Trennungslinie des
Blattstamens

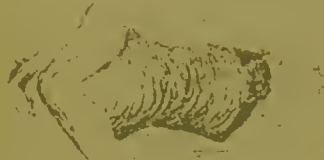
Gelbst 23. IV. Dyrsholm

16/III



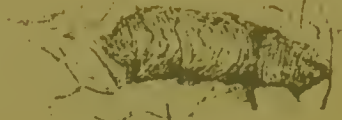
Martin 17/III

I Dyrsholm



Gelbst 21/III

Dyrsholm



31/III

a

b

a. Green? brown? Dyrsholm when last in inner bag
b. Green? brown? Dyrsholm, the common!

Free 15/11
 II. Spring 18/11

II. Spring 18/11



Free 15/11

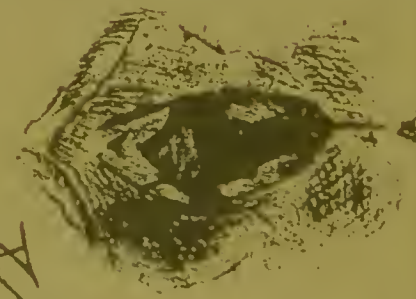


14/11

Free 15/11

Free 15/11

II. Spring 18/11



14/11

a. Sandstone
 b. Apples } Map

Water 29/2

II Infanzspiß

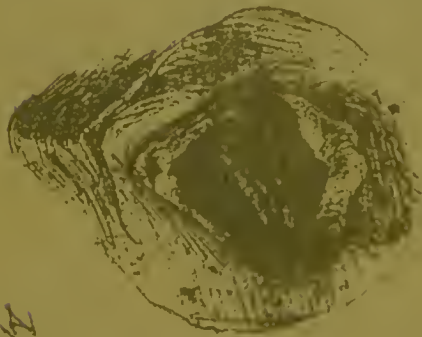
Oct 1, Kunst von

8 Minuten

gehewen
Zustehen

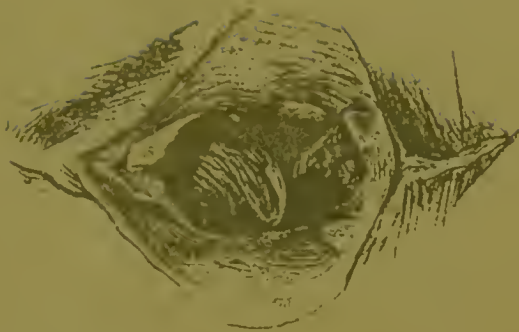
Zeit für die Zeit

3 Minuten von der
Gebäude der Lungen
wegen der Arbeit
Mengen der Arbeit
müßig Arbeit



Grund. von 4/VI Infanzrelung

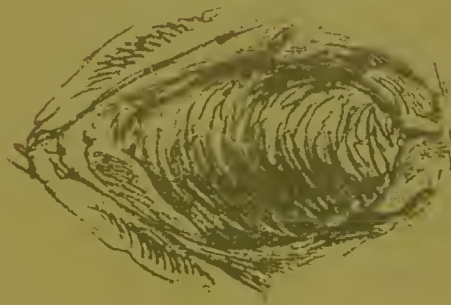
14/VI



a

ii. Chirurp

Gohler 13/18



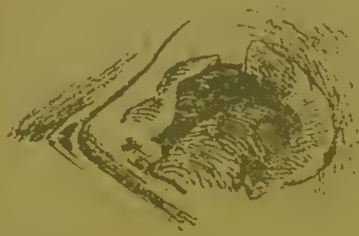
Gohler 18/18



28/18

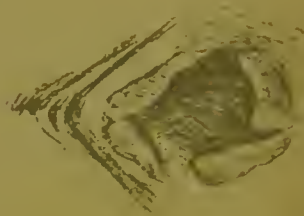
II Gohler Scheldt 16/18

Vorfall der
muskeligen
muskel



Gohler 18/18

Gohler 18/18



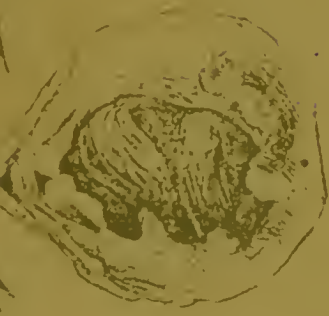
25/18

Lehrung 20/1

II. Pflanzungs

Eiter 21/1

II. Pflanzungs



Lehrung 20/1

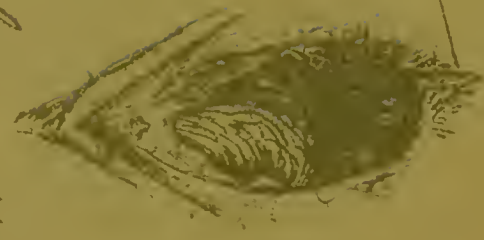
II. Pflanzungs

Lehrung

Lehrung 20/1



20/1



3/1

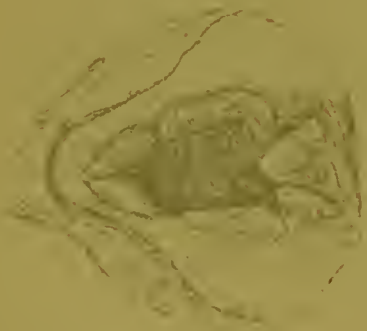
2

Lehrung 20/1

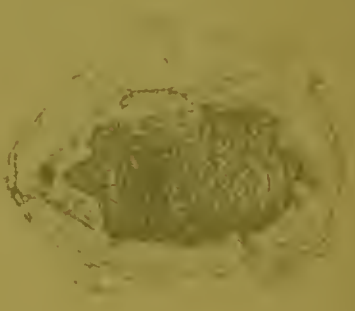
Lehrung 20/1

September 9/11

III. *Epiphyllum* *longistylus* 2/11

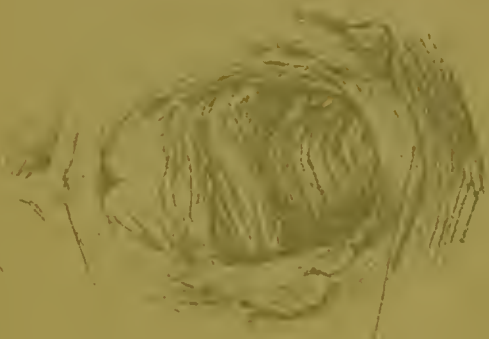


October 3/11 *Epiphyllum*



16/11

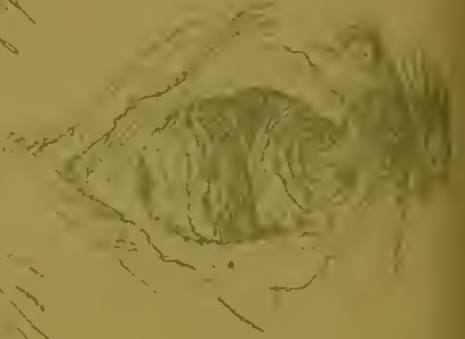
IV. *Epiphyllum*



Epiphyllum

October 10/11

Epiphyllum



11/11

entrance. On account of this condition, the entrance to the vagina of persons who have not borne children is characterized in contradistinction to that of others who have borne a child.

With the latter, the vaginal entrance undergoes, just in consequence of the birth, great changes. By the birth the narrow vaginal entrance suffers a dilatation when the head cuts out through it, which, as a rule, is not possible without lesions. We see, therefore, in the case of primiparæ, as well as of women whose entrance to the vagina has not yet been distended by former births, quite regular tears in the mucous membrane posteriorly, laterally, as well as anteriorly. But, besides that, the shreds of the hymen suffer a considerable bruising. If we examine the vaginal entrance of a primipara immediately after the delivery, when the blood has been carefully wiped away, we see the parts of the hymen still completely preserved, but infiltrated with blood, of a swollen appearance, and of a bluish-black colour. If we examine again a few days later, we find, in place of separate shreds, small ulcers, with a yellow exudation, or already a good granulating base. At the place where these ulcers are every trace of the hymen disappears, whilst on the other less bruised places remains of the hymen are preserved. These remaining parts which are preserved after the birth are the *carunculæ myrtiformes*. How much there remains preserved of the hymen is very varied, as you can at once convince yourselves from the drawings. The fold of mucous membrane below the *orificium urethræ* is commonly preserved, and is not usually reckoned to the *carunculæ myrtiformes*. Besides, there remains behind in the vaginal entrance different shred-like, warty, or tongue-shaped remains.

You will be able to see quite distinctly these conditions in the drawings before you, which are drawn from nature by Dr Alt. Each vaginal entrance is twice sketched, once before delivery, and once some time (ten days or later) after it. Those drawings, which are taken of primiparæ, demonstrate clearly the difference between the remains of the hymen as you find them in deflowered females (*defloratæ*) and the *carunculæ myrtiformes*.

You see in the first three double pictures the hymen during the pregnancy as a small completely preserved border, which presents only at separate places more or less deep indentations, but which nowhere extend to the base of the hymen. After the birth, you see two cases healed by the first intention, and in one case a superficial granulating tear of the perinæum. Besides, you see in the one case still two lateral tears going through the *labia minora*, which, although they have not so arisen, look exactly like artificially-made lateral incisions. In two of these cases, only a few wart-like excrescences have been preserved besides the fold under the orifice of the urethra; in the third are more numerous remains of the hymen, but still interrupted by wide openings between.

On the following leaf you will see a peculiarity of the hymen

which I have observed a few times only. On the left hand forwards the fold of the hymen is torn away from its origin, so that one could quite easily pass a catheter through the opening. To the right the inner surface of the lesser labium has united with the external surface of the fold of the hymen. Also in this case, in which the hymen is nowhere quite torn through, and the entrance to the vagina is very wide, we have only single caruncles preserved.

The following three leaves show you much tattered hymens, the openings of which were originally very narrow. There is found in them a row of tears, some of which go to the base. The entrance to the vagina appears narrow in all, and in harmony with that, numerous granulating tears of the mucous membrane exist, and the parts so singled out remained over as caruncles. On the one drawing you see still granulating remains of the hymen.

Here you see the vaginal entrance of a primipara, which is distinguished by the hymen being still very complete, indeed, it has been preserved all but a wide gaping space posteriorly.

In the case of the pregnant one, whose vaginal entrance now follows, the whole vulva was exceedingly oedematous, and the vaginal entrance quite unusually narrow. We see on account of this the separate remains of the hymen projecting as thick round swellings out of the vaginal entrance. As the pelvis was narrowed in a high degree, perforation and cephalotripsy became necessary. The narrow vaginal entrance, in which lateral incisions had to be made, was very much injured. Besides a tearing of the perineum, the mucous membrane in the whole circumference of the mouth of the vagina was torn into, and these tearings, and especially one between the clitoris and urethra, as well as the lateral incisions, bled so much that tampons, with liquor ferri sesquichl., had to be pressed into them. On the seventh week after the delivery the vaginal entrance was again sketched. You see, in consequence of the above, no more trace of the hymen, but only thick white cicatricial strings stretching beyond the orifice of the urethra towards both sides. The lateral incisions, as well as the perineal tear, are likewise cicatrized. In the following case an abortion in the fifth month had previously taken place. This had, however, left behind it scarcely any trace, as the hymen was quite well preserved, all but a small opening to the left. The timely birth which followed thereafter has, as you see, left behind only a few caruncles.

The following leaf represents a similar middle position between the appearance of the vaginal entrance in a primipara and multipara. The pregnant one in question had at one time borne a dead putrid child in the eighth month. The vaginal entrance was, on account of this birth, much less distended than is usual. In conformity with that, is the fact that the hymen was completely

preserved, with the exception of a pretty considerable opening on the right side. It was much destroyed, all but a few remains by the present second birth.

On the six leaves now following of second pregnancies, you see at once by the first drawing always distinct carunculæ myrtiformes, which you then find again on the second drawing, with few alterations.

But this vaginal entrance of a third pregnancy is different. You see how the hymen has passed so luckily through both of the preceding births, that there have been preserved everywhere large shreds separated from one another by small openings only. The third birth has first so completely destroyed these, that only quite a few, and these very small, remains have survived.

In conclusion, you see here also the vaginal entrance of a fourth pregnancy, with few caruncles, but which have all out-lived even the fourth birth.

You will have convinced yourselves from these drawings, that the difference between the remains of the hymen in females who have not borne children and such as have borne children is striking to the eye, and that consequently the condition of the vaginal entrance is one of the best means of deciding the question whether a female has already borne children or not.¹

¹ Professor Dr Schroeder kindly lent the original pencil-drawings, and allowed them to be copied, which has been most successfully accomplished by the Messrs Waterston, Sons, and Stewart.

L U N A C Y

IN ITS

RELATIONS TO THE STATE.

